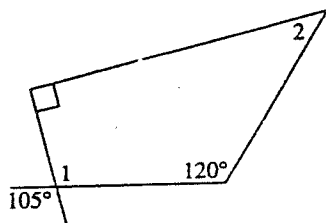


QUADRILATERALS

Complete the following questions by naming the quadrilateral, finding the measures of angles and lengths, and giving reasons for your answers.

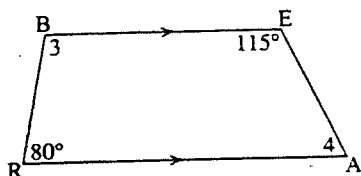
1.



$\angle 1 = 105^\circ$ vertically op.

$\angle 2 = 45^\circ$ \angle s in quad. add to 360°
 $360 - 120 - 105 - 90$

2.

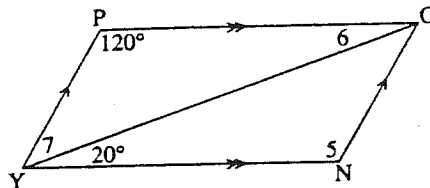


BEAR is a trapezoid

$\angle 3 = 100^\circ$ int \angle s add to 180°

$\angle 4 = 65^\circ$ \angle s in quad.
 $360 - 100 - 80 - 115$

3.



PONY is a parallelogram

PY = ON opposite sides of par.

$\angle 5 = 120^\circ$ opp. \angle s of par.

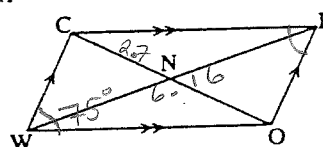
$\angle PYN = 60^\circ$ int \angle s with 120°

$\angle 6 = 20^\circ$ alt int.

$\angle 7 = 40^\circ$ $\angle PYN - 20$ or

\angle s in $\Delta (180 - 120 - 20)$

4.



CN = 2.7 cm

WR = 6.16 cm

$\angle CWO = 75^\circ$

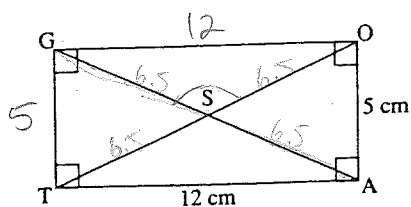
ON = 2.7 cm bisected by WR

WN = 3.08 cm $6.16 \div 2$

$\angle CRO = 75^\circ$ opp \angle of parallelogram

$\angle WOR = 105^\circ$ int \angle s with 75°

5.



GOAT is a

rectangle

AG = TO

diagonalsAG = 13 cm

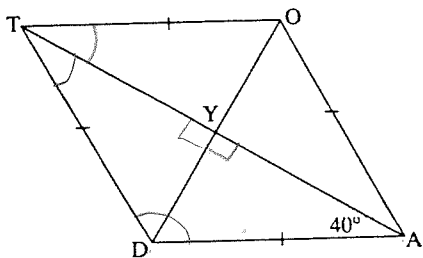
$$AG^2 = 5^2 + 12^2$$

GS = 6.5 cm

$$13 \div 2$$

 $\triangle GSO$ isisosceles $\triangle OAS$ isisosceles

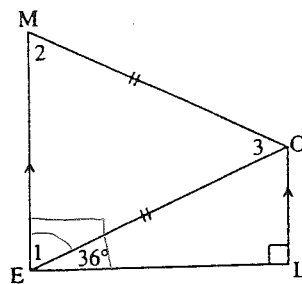
6.



TOAD is a

Rhombus $\triangle DOT$ isisosceles $\angle DYA =$ 90° rhombus $\triangle DYT$ isright triangle $\angle DTA =$ 40° isosceles w 40° $\angle TDA =$ 100° ISOSC. $180 - 40 - 40$ $\angle OTA =$ 40° diag. bisect \angle s
so $\angle DTA = \angle OTA$

7.



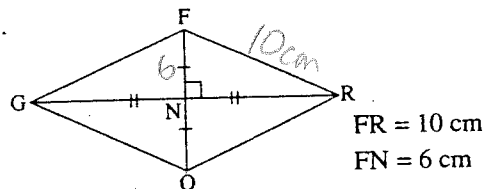
MOLE is a

trapezoid

$$\angle 1 = 54^\circ \quad 180 - 90 - 36^\circ \text{ (int } \angle \text{s add to } 180)$$

 $\angle 2 =$ $\angle 3 =$

8.



FROG is a

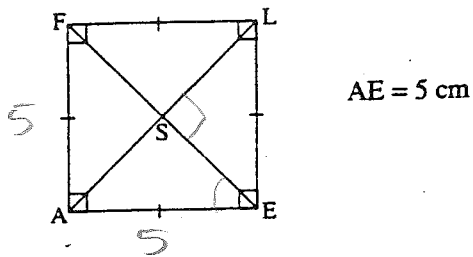
parallelogram (diag. bisect)FG = 10 cmsame as $\triangle FNR$ NR = 8 cm

$$(10\text{ cm})^2 = 6^2 + NR^2$$

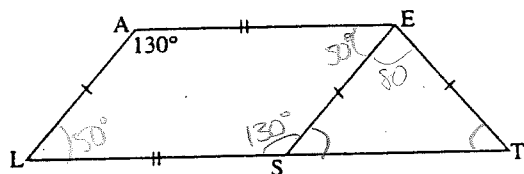
FO = 12 cm

$$6 \times 2$$

9.

FLEA is a square $\angle LSE = 90^\circ$ diag. bisect @ 90° $\angle SEA = 45^\circ$ diag. bisect corners $FE = \sqrt{50}$ cm $5^2 + 5^2 = FE^2$

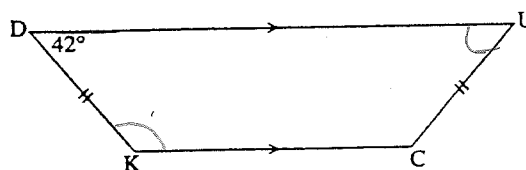
10.

SEAL is a parallelogramTEAL is a trapezoid $\angle LSE = 130^\circ$ opp \angle s of par. $\angle EST = 50^\circ$ supplementary $\angle ETS = 50^\circ$ isosceles $\angle ALT = 50^\circ$ corresponding or opp \angle s of par.

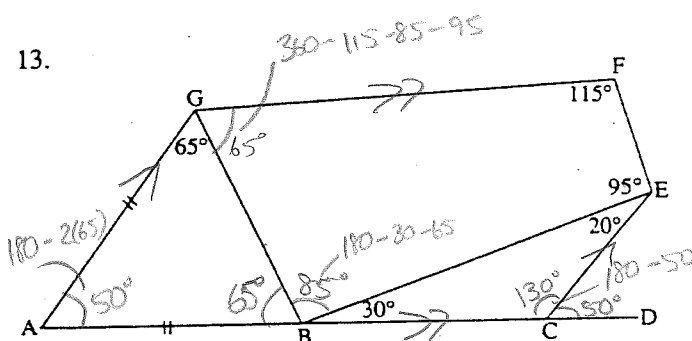
11. In question 10, TEAL is an isosceles trapezoid. What distinguishing properties does this shape have?

- all vertical lines are equal- outside lower angles are =- " upper " " =

12.

DUCK is a(n) isosceles trapezoid $\angle DUC = 42^\circ$ " " $\angle DKC = 138^\circ$ int \angle s add to 180° $\angle KCU = 138^\circ$ isosc. trap.

13.

Name all the pairs of parallel segments in the diagram.
State the reason for each answer. Calculate all \angle s firstAG // CE corresponding \angle s = 50° AD // FG alt int \angle s = 65° BG // EF int \angle s add to 180°
($85 + 95$)